Remarks

The Examiner rejected claims 1-4, 6-8, 14, 19, 22-24, 26-28, 34, 39 and 56 as unpatentable under 35 U.S.C. § 103 as being obvious over U.S. Patent No. 5,183,111 issued to Schellstede in view of U.S. Patent No. 4,346,049 issued to Brown and U.S. Patent No. 4,765,173 issued to Schellstede. Reconsideration is requested.

Applicant's invention, as defined in amended independent claims 1 and 22, comprises an apparatus for withdrawing and injecting fluid through the wall of a tubular structure. The apparatus comprises a housing with an inlet and an operating flow path beginning with the inlet. The apparatus includes a fluid driven setting/pack-off assembly to releasably secure the housing in the casing and to provide a releasable seal around the perforation to be formed.

Also included is a fluid driven perforating assembly in the housing that comprises a piercing member. The piercing member includes a flow path, and the perforating assembly defines a fluid flow path continuous with the operating fluid flow path through the housing and the fluid flow path in the piercing member. Thus, when the piercing member extends through the wall of the casing, a continuous flow path is formed between the inlet of the housing and the piercing member extending beyond the perforation.

Also included in the tool is a pressurized fluid reservoir contained within the housing and operatively connected to the seal assembly and the perforating assembly. An operating valve is provided to control fluid flow between the fluid reservoir and the seal assembly and between the fluid reservoir and the perforating assembly. **The**

operating valve operates independent of the flow of fluid through the elongate conduit. Thus, the movement of the piercing member and the setting/packoff assembly is driven by the internal fluid reservoir and is independent of the fluid source at the surface.

Applicant's tool utilizes an internal pressurized fluid source to drive the operation of the seal and perforating mechanisms in the tool, so the treatment operations (for example, injection of cement or withdrawal of test fluids from the formation) can be conducted through the supporting conduit. In a typical operation utilizing this tool, the operator sets the tool, perforates the casing, and withdraws fluid from the formation to determine if the casing needs to cemented or if the formation needs to treated. If the test indicates that treatment is required, this is carried out next. For example, acid may be injected to break down the formation. Next, the well is tested again, if desired. Depending on the results of the testing step, the casing then can be cemented.

All of these operations can be carried out, without moving the tool. The operator simply changes the source of the fluid at the surface. Moreover, the nature and sequence of the operations are not predetermined. That is, the operator can decide on a step by step what operation needs to be taken and in what order and how many times. This is possible because, in Applicant's tool, the seal and the setting/pack-off assemblies are operated independent of the flow of fluid through the supporting conduit. All of these operations can be carried out without moving the tool and without affecting the position of the seal or the setting/pack-off assembly.

These features and advantages are not shown or suggested by any of the cited references, whether considered separately or in combination. Schellstede '111

shows a cutting tool for penetrating casing. Specifically, the cutting tool is a rotary member that is driven by pressurized fluid supplied from the surface. There is no showing in Schellstede '111 of how to drive the cutting tool without the use of the surface fluid. Moreover, in Schellstede '111, the anchor device is controlled by fluid flow from the surface. It would be impossible to withdraw and inject treatment fluids using the Schellstede '111 tool. Thus, Applicant's device is not shown or suggested by Schellstede '111.

Brown shows a well treatment device that uses a shaped charge to perforate the casing. Since the shaped charge requires an electrical signal for initiation, the tool is supported by a wire line. See column 9, lines 46-60. Since the wire line cannot conduct fluids, the treatment solutions are contained inside the Brown tool. Thus, the amount of treatment fluid is limited to the volume contained in the tool, and there is no way to withdraw test fluids from the well or to switch between types of fluids being injected. The seal assembly in Brown is driven by an internal source of pressurized fluid activated by an electrical signal through in the wire line.

Even if Brown were combined with the Schellstede '111 tool, the result would not be Applicant's claimed invention. Rather, the result would be an internal fluid supply that is controlled by fluid flow from the surface. This is what Applicant's tool advantageously avoids. Clearly, Brown does not supply the deficiencies of Schellstede '111. Accordingly, the invention of claim 1 is not rendered obvious by the combination of Brown with Schellstede '111.

Schellstede '173 shows another tool used strictly for perforating the casing and without the ability to treat the well or withdraw test fluids from the formation. In

Schellstede '173, high pressure fluid from the surface is used to drive or initiate the operation of the perforating mechanism as well as to fracture the formation. It is not possible to operate the one independent of the other. There is no teaching of how to use a high pressure reservoir and an operating valve, which are both in the tool housing, to drive the seal and perforation devices, as in Applicant's tool, allowing for independent use of the supporting conduit to flow a treatment fluid into the annulus or to withdraw test fluids from the formation. Accordingly, even if Schellstede '173 is combined with Schellstede '111 and Brown, the claimed invention is not rendered obvious.

The Examiner indicated that claim 57 contained allowable subject matter. Claim 56 has been amended to include the elements of claim 57, and claim 57 has been cancelled. Accordingly, it is submitted that claim 56 now is allowable.

Based on the foregoing, withdrawal of the Section 103 rejection of independent claims 1, 22 and 56 respectfully is requested. Because claims 2-4, 6-8, 14, 19, 23-24, 26-28, 34 and 39 depend from one of these independent claims, these dependent claims likewise are allowable over Schellstede '111, Brown, and Schellstede '173.

The Examiner rejected claims 5 and 25 as obvious under Section 103 over Schellstede '111, in view of Brown and Schellstede '173. Reconsideration is requested.

Claim 5 depends from claim 1, and claim 25 depends from claim 22. As claims 1 and 22 are patentable, these dependent claims also are allowable. Withdrawal of the Section 103 rejection of claims 5 and 2, based on Schellstede '111, Brown and Schellstede '173 is requested

The Examiner's allowance of claim 48-55 is gratefully acknowledged by the Applicant. In addition, the Examiner indicated that claims 9-13, 15-18, 20, 21, 29-33,

35-38, 40, 41 and 57 contain allowable subject matter. Since the independent claims from which these claims depend are now allowable, this objection is moot.

Based on the foregoing, it is submitted that claims 1-41 and 48-56 are patentable over the references of record. A Notice of Allowance is courteously solicited. If the Examiner has any questions or comments concerning the instant application or this Amendment, the Examiner is invited to contact the undersigned.

This is intended to be a complete response to the Office action of December 2, 2003.

Respectfully Submitted,

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